

ABSTRACT OF THE DISCLOSURE

The present invention is directed to a controlled environment processing chamber or chambers in which solvents and/or solutions used for processing a material or object can be introduced. The process includes a means of applying a negative gauge pressure to the chamber to remove air or other non-condensable gases. Means are provided for introducing a solvent, solvent mixture or solution in either a liquid or vapor state. A first system recovers solvent(s) or solution(s) from the object being processed and chamber, and a second system, separate from the first system, further recovers residual solvent or solution from the object and chamber. Treatment may be in the form of coating, etching, deposition, cleaning, stripping, plating, adhesion, dissolving, penetrating, anodizing, impregnating, debinding or any other process in which material is removed or deposited on a solid surface by transfer from or to a liquid or gas phase. Another aspect of the invention provides for a method of processing an object using the system described above.